Chapter 9.0 International Emissions

9.1 WHAT DATA ARE PRESENTED IN THIS CHAPTER?

This chapter presents the 1996 European emission estimates for the pollutants carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), nonmethane volatile organic compounds (NMVOCs), methane (CH_4), carbon dioxide (CO_2), nitrous oxide (N_2O), and ammonia (NH_3), and the 1995 Canadian emission estimates for the pollutants CO, NO_x, volatile organic compounds (VOC), SO_2, total particulate (TP), particulate matter (PM) less than 10 microns in diameter (PM_{10}), and PM less than 2.5 microns in diameter ($PM_{2.5}$).

9.2 WHAT EUROPEAN EMISSIONS ARE PRESENTED?

In 1993, the European Union launched the European Environment Agency (EEA) with a mandate to orchestrate, cross-check, and put to strategic use information relevant to protecting and improving Europe's environment.[1] CORINAIR (Coordination of Environmental Air) is the air emission inventory for Europe The CORINAIR project is part of the work program of the EEA. The EEA designated the European Topic Center on Air Emissions (ETC/AEM) to perform the CORINAIR project by assisting participating countries to report their national inventories as required under international obligations. Based on these reports the ETC/AEM prepares the European air emission inventory and database.[2]

The countries that submitted 1996 data on emissions of ozone precursors and acidifying pollutants to CORINAIR include Austria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Luxembourg, the Netherlands, Norway, Slovenia, and the United Kingdom. In addition, the following countries submitted 1996 data on emissions of greenhouse gases to the United Nations Framework Convention on Climate Change (UNFCCC): Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Luxembourg, the Netherlands, Norway, Slovenia, Spain, Sweden, and the United Kingdom.

Table 9-1 shows European national total emissions for 1996 for the following pollutants: SO_2, NO_x, NMVOC, CH_4, CO, CO_2, and NH_3. Tables 9-2 through 9-8 present 1996 country-level summary data by CORINAIR/EMEP (Cooperative Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe) source category for SO_2, NO_x, NMVOC, CO, and NH_3. The CORINAIR/EMEP source categories include:

- Combustion in energy and transformation industries
- Nonindustrial combustion plants
- Combustion in manufacturing industry
- Production processes
- Extraction and distribution of fossil fuels/geothermal energy
- Solvent and other product use
- Road transport
- Other mobile sources and machinery
- Waste treatment and disposal
- Agriculture and forestry, land use and woodstock change
- Nature

Because some countries included estimates of NMVOC and CO_2 emissions in the Nature and the Agriculture categories, these tables include a "Comparable Total" line, omitting these two categories for each country.

Tables 9-9 to 9-13 present 1996 country-level summary data by EEA source category for CH_4, CO_2, and N_2O. The EEA source categories include Energy, Industry, Transport, Agriculture, Waste, and Other.

9.3 WHAT CANADIAN EMISSIONS ARE PRESENTED?

The criteria air pollutant annual emissions data for Canada were provided by Environment Canada[3] for 1995. Emissions were provided for CO, NO_x, VOC, SO_2, TP, PM_{10}, and $PM_{2.5}$. Table 9-14 presents the emission estimates for Canada by major source category. Table 9-15 presents the emissions for Canada by Province.

9.4 REFERENCES

1. European Environment Agency, at **http://org.eea.eu.int/**. January 2000.
2. "ETC/Air Emissions" (Database version 2.2, 10/25/99), at **http://warehouse.eea.eu.int/**, European Topic Centre on Air Emissions, European Environment Agency, Copenhagen, Denmark. October 1999.
3. Environment Canada, at **http://www.ec.gc.ca**. August 1999.
4. "Population for the Countries of the World: 1996," at **gopher://gopher.undp.org**, United Nations Population Division. August 1999.
5. "World Emissions Tables," at **http://projects.dnmi.no/%7emep/emis_tables/**, Meteorological Synthesizing Centre-West, EMEP. July 1999.

Table 9-1. 1996 Emission Estimates for Europe by Country and Pollutant (thousand short tons; except CO_2 [million short tons])

Country	Population (million)	SO_2	NO_x	NMVOC	CH_4	CO	CO_2	NH_3
Armenia	3.6	2	12	20	NA	138	NA	0
Austria	8.1	57	180	288	493	1,125	NA	84
Belarus	10.3	271	191	362	NA	1,339	NA	4
Belgium	10.1	265	368	357	NA	1,369	NA	107
Bulgaria	8.4	1,565	285	162	546	676	NA	91
Croatia	4.5	64	74	87	148	413	20	25
Cyprus	0.8	51	23	NA	NA	NA	7	NA
Czech Republic	10.2	1,043	476	313	632	977	142	89
Denmark	5.2	205	317	150	468	658	80	109
Finland	5.1	116	294	191	281	474	73	39
France	58.3	1,136	1,809	2,833	3,142	9,755	366	736
Germany	81.9	1,701	2,080	2,069	3,939	7,404	1,013	715
Greece	10.4	599	412	451	504	1,470	101	NA
Hungary	10.0	742	216	165	NA	801	74	86
Ireland	3.6	162	133	114	811	338	40	141
Latvia	2.5	65	39	45	103	194	12	NA
Lithuania	3.7	103	72	96	314	344	21	40
Luxembourg	0.4	9	24	20	25	114	8	8
Netherlands	15.6	149	552	399	1,359	995	209	161
Norway	4.3	37	246	407	535	794	45	29
Poland	38.6	2,610	1,272	844	2,016	5,332	NA	408
Russian Federation	148.1	2,960	2,719	2,840	3,457	10,265	1,653	826
Slovakia	5.3	250	143	116	330	381	50	55
Slovenia	1.9	121	77	NA	NA	105	17	NA
Sweden	8.8	91	333	492	327	1,193	69	67
Switzerland	7.2	33	143	224	259	535	NA	78
Ukraine	51.6	1,425	515	791	NA	2,830	NA	NA
United Kingdom	58.1	2,223	2,237	2,255	4,094	5,511	654	352
Yugoslavia	10.3	478	63	NA	NA	NA	NA	NA
Total	586.9	18,533	15,305	16,091	23,783	55,530	4,654	4,250

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source of population data: United Nations Population Division[4]
Source of emission data: EMEP, Meteorological Synthesizing Centre-West[5]

Table 9-2. 1996 Emission Estimates for Austria and the Czech Republic by CORINAIR/EMEP Source Category and Pollutant
(thousand short tons)

Austria	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	9	11	0	1	0
Nonindustrial combustion plants	18	22	46	478	1
Combustion in manufacturing industry	10	17	1	6	0
Production processes	15	21	25	291	0
Extraction and distribution of fossil fuels/geothermal energy	1	0	4	0	0
Solvent and other product use	0	0	147	0	0
Road transport	3	93	58	335	3
Other mobile sources and machinery	0	8	3	8	0
Waste treatment and disposal	0	0	1	5	0
Agriculture and forestry, land use and woodstock change	0	7	3	2	80
Nature	0	1	181	0	1
Total	57	180	469	1,126	85
Comparable Total	57	178	285	1,126	84

Czech Republic	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	715	131	5	17	0
Nonindustrial combustion plants	186	49	48	366	0
Combustion in manufacturing industry	130	45	10	271	0
Production processes	2	1	31	1	2
Extraction and distribution of fossil fuels/geothermal energy	0	0	3	0	0
Solvent and other product use	0	0	131	0	0
Road transport	6	191	72	263	1
Other mobile sources and machinery	3	59	13	59	0
Waste treatment and disposal	0	1	0	0	0
Agriculture and forestry, land use and woodstock change	0	0	0	0	87
Nature	0	0	45	0	1
Total	1,043	476	358	977	90
Comparable Total	1,043	476	313	977	89

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding. Negative emissions represent a sink for greenhouse gas.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-3. 1996 Emission Estimates for Denmark and Finland by CORINAIR/EMEP Source Category and Pollutant
(thousand short tons)

Denmark	**SO_2**	**NO_x**	**NMVOC**	**CO**	**NH_3**
Combustion in energy and transformation industries	160	142	2	12	0
Nonindustrial combustion plants	13	8	13	133	0
Combustion in manufacturing industry	13	16	1	7	0
Production processes	3	1	12	0	0
Extraction and distribution of fossil fuels/geothermal energy	0	0	8	48	0
Solvent and other product use	0	0	23	0	0
Road transport	2	87	67	391	1
Other mobile sources and machinery	8	62	13	66	0
Waste treatment and disposal	0	2	1	1	0
Agriculture and forestry, land use and woodstock change	0	0	1	0	108
Nature	0	0	10	0	0
Total	198	318	150	659	109
Comparable Total	198	318	139	659	109

Finland	**SO_2**	**NO_x**	**NMVOC**	**CO**	**NH_3**
Combustion in energy and transformation industries	48	48	0	8	0
Nonindustrial combustion plants	15	15	35	73	0
Combustion in manufacturing industry	27	36	0	47	0
Production processes	23	8	12	11	1
Extraction and distribution of fossil fuels/geothermal energy	0	0	10	0	0
Solvent and other product use	0	0	35	0	0
Road transport	1	189	75	331	0
Other mobile sources and machinery	2	0	20	3	0
Waste treatment and disposal	0	0	2	0	0
Agriculture and forestry, land use and woodstock change	0	0	0	0	37
Nature	0	0	0	0	0
Total	116	297	190	473	39
Comparable Total	116	297	190	473	39

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-4. 1996 Emission Estimates for France and Germany by CORINAIR/EMEP Source Category and Pollutant
(thousand short tons)

France	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	394	140	4	18	0
Nonindustrial combustion plants	95	118	237	2,044	0
Combustion in manufacturing industry	295	170	12	615	0
Production processes	80	19	95	638	31
Extraction and distribution of fossil fuels/geothermal energy	15	0	110	0	0
Solvent and other product use	0	0	634	0	0
Road transport	129	988	985	4,980	8
Other mobile sources and machinery	18	410	158	466	0
Waste treatment and disposal	18	25	31	256	4
Agriculture and forestry, land use and woodstock change	0	0	20	0	848
Nature	0	3	413	84	0
Total	1,044	1,873	2,700	9,100	891
Comparable Total	1,044	1,870	2,266	9,017	891

Germany	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	931	377	8	129	3
Nonindustrial combustion plants	323	179	97	1,737	0
Combustion in manufacturing industry	315	247	9	742	1
Production processes	68	14	139	649	9
Extraction and distribution of fossil fuels/geothermal energy	17	0	46	0	0
Solvent and other product use	0	0	1,113	0	1
Road transport	34	999	600	3,954	35
Other mobile sources and machinery	13	265	57	193	0
Waste treatment and disposal	0	0	0	0	0
Agriculture and forestry, land use and woodstock change	0	0	0	0	666
Nature	0	0	425	0	0
Total	1,702	2,080	2,495	7,404	715
Comparable Total	1,702	2,080	2,069	7,404	715

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-5. 1996 Emission Estimates for Greece and Ireland by CORINAIR/EMEP Source Category and Pollutant
(thousand short tons)

Greece	**SO_2**	**NO_x**	**NMVOC**	**CO**	**NH_3**
Combustion in energy and transformation industries	435	91	4	8	0
Nonindustrial combustion plants	16	9	11	156	0
Combustion in manufacturing industry	88	26	8	17	0
Production processes	18	37	20	23	1
Extraction and distribution of fossil fuels/geothermal energy	0	0	18	0	0
Solvent and other product use	0	0	64	0	0
Road transport	10	114	208	1,038	1
Other mobile sources and machinery	28	110	19	144	0
Waste treatment and disposal	0	2	9	13	0
Agriculture and forestry, land use and woodstock change	0	5	53	127	85
Nature	0	0	0	0	0
Total	596	394	414	1,527	87
Comparable Total	596	394	362	1,527	87

Ireland	**SO_2**	**NO_x**	**NMVOC**	**CO**	**NH_3**
Combustion in energy and transformation industries	102	46	0	4	0
Nonindustrial combustion plants	31	9	6	62	0
Combustion in manufacturing industry	36	11	0	2	0
Production processes	0	0	1	0	0
Extraction and distribution of fossil fuels/geothermal energy	0	0	4	0	0
Solvent and other product use	0	0	24	0	0
Road transport	6	51	65	262	0
Other mobile sources and machinery	2	10	2	6	0
Waste treatment and disposal	0	0	0	1	0
Agriculture and forestry, land use and woodstock change	0	0	93	0	136
Nature	0	0	0	0	0
Total	178	127	196	337	137
Comparable Total	178	127	103	337	137

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-6. 1996 Emission Estimates for Luxembourg and the Netherlands by CORINAIR/EMEP Source Category and Pollutant
(thousand short tons)

Luxembourg	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	0	0	0	0	0
Nonindustrial combustion plants	1	1	1	9	0
Combustion in manufacturing industry	7	8	0	44	0
Production processes	0	0	1	9	2
Extraction and distribution of fossil fuels/geothermal energy	0	0	2	0	0
Solvent and other product use	0	0	4	0	0
Road transport	1	11	9	45	0
Other mobile sources and machinery	0	1	1	3	0
Waste treatment and disposal	0	0	0	0	0
Agriculture and forestry, land use and woodstock change	0	0	1	0	6
Nature	0	0	1	0	0
Total	9	22	20	111	8
Comparable Total	9	22	18	111	8

Netherlands	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	53	71	2	20	0
Nonindustrial combustion plants	3	52	13	115	0
Combustion in manufacturing industry	34	61	8	72	0
Production processes	26	18	78	184	4
Extraction and distribution of fossil fuels/geothermal energy	0	0	31	0	0
Solvent and other product use	0	0	94	0	1
Road transport	12	233	148	536	0
Other mobile sources and machinery	19	100	13	41	0
Waste treatment and disposal	1	2	7	9	0
Agriculture and forestry, land use and woodstock change	0	17	3	19	155
Nature	0	1	0	9	7
Total	149	554	399	1,005	167
Comparable Total	149	553	395	996	161

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-7. 1996 Emission Estimates for Norway and Slovenia by CORINAIR/EMEP Source Category and Pollutant
(thousand short tons)

Norway	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	1	32	2	7	0
Nonindustrial combustion plants	2	3	11	153	0
Combustion in manufacturing industry	6	9	1	8	0
Production processes	23	10	20	44	0
Extraction and distribution of fossil fuels/geothermal energy	0	0	232	0	0
Solvent and other product use	0	0	52	0	0
Road transport	2	72	68	488	1
Other mobile sources and machinery	3	109	19	65	0
Waste treatment and disposal	0	7	1	1	0
Agriculture and forestry, land use and woodstock change	0	0	0	0	28
Nature	0	0	0	0	0
Total	37	243	406	766	29
Comparable Total	37	243	406	766	29

Slovenia	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	105	18	0	1	0
Nonindustrial combustion plants	8	3	0	4	0
Combustion in manufacturing industry	6	3	0	0	0
Production processes	0	0	0	0	0
Extraction and distribution of fossil fuels/geothermal energy	0	0	0	0	0
Solvent and other product use	0	0	0	0	0
Road transport	1	51	0	97	0
Other mobile sources and machinery	0	3	0	2	0
Waste treatment and disposal	0	0	0	0	0
Agriculture and forestry, land use and woodstock change	0	0	0	0	0
Nature	0	0	0	0	0
Total	121	77	0	105	0
Comparable Total	121	77	NA	105	NA

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-8. 1996 Emission Estimates for the United Kingdom by CORINAIR/EMEP Source Category and Pollutant
(thousand short tons)

United Kingdom	SO_2	NO_x	NMVOC	CO	NH_3
Combustion in energy and transformation industries	1,598	613	9	228	5
Nonindustrial combustion plants	141	126	37	258	0
Combustion in manufacturing industry	287	186	8	37	0
Production processes	109	5	201	50	0
Extraction and distribution of fossil fuels/geothermal energy	8	1	323	4	0
Solvent and other product use	0	0	666	0	0
Road transport	41	1,065	699	3,637	11
Other mobile sources and machinery	50	267	132	879	0
Waste treatment and disposal	1	8	51	27	12
Agriculture and forestry, land use and woodstock change	0	0	88	0	329
Nature	0	0	0	0	0
Total	2,235	2,271	2,215	5,121	357
Comparable Total	2,235	2,271	2,127	5,121	357

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-9. 1996 Emission Estimates for Austria, Belgium, Czech Republic, and Denmark by EEA Source Category and Pollutant

(thousand short tons; except CO_2 [million short tons])

Austria	**CH_4**	**CO_2**	**N_2O**
Energy	0	13	0
Industry	0	21	1
Transport	2	17	2
Agriculture	227	0	4
Waste	241	0	0
Other	22	4	2
Total	492	54	8

Belgium	**CH_4**	**CO_2**	**N_2O**
Energy	0	34	2
Industry	3	45	18
Transport	4	25	1
Agriculture	389	0	12
Waste	212	0	0
Other	51	37	7
Total	658	141	41

Czech Republic	**CH_4**	**CO_2**	**N_2O**
Energy	NA	NA	NA
Industry	NA	NA	NA
Transport	NA	NA	NA
Agriculture	NA	NA	NA
Waste	NA	NA	NA
Other	NA	NA	NA
Total	NA	NA	NA

Denmark	**CH_4**	**CO_2**	**N_2O**
Energy	2	49	2
Industry	1	8	0
Transport	3	13	1
Agriculture	354	0	33
Waste	81	0	0
Other	28	10	1
Total	469	80	37

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding. Negative emissions represent a sink for greenhouse gas.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-10. 1996 Emission Estimates for Estonia, Finland, France, and Germany by EEA Source Category and Pollutant

(thousand short tons; except CO_2 [million short tons])

Estonia	CH_4	CO_2	N_2O
Energy	0	22	0
Industry	0	0	0
Transport	0	2	0
Agriculture	33	0	0
Waste	34	0	0
Other	2	-3	1
Total	70	20	1

Finland	CH_4	CO_2	N_2O
Energy	2	30	3
Industry	7	16	5
Transport	3	12	2
Agriculture	90	0	10
Waste	176	0	0
Other	18	15	1
Total	298	73	20

France	CH_4	CO_2	N_2O
Energy	2	66	2
Industry	9	109	91
Transport	21	149	9
Agriculture	1,725	0	193
Waste	675	4	4
Other	565	48	27
Total	2,997	376	326

Germany	CH_4	CO_2	N_2O
Energy	8	398	14
Industry	9	182	99
Transport	32	192	23
Agriculture	1,712	2	94
Waste	873	0	4
Other	1,305	204	12
Total	3,939	976	247

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding. Negative emissions represent a sink for greenhouse gas.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-11. 1996 Emission Estimates for Greece, Ireland, Luxembourg, and Netherlands by EEA Source Category and Pollutant

(thousand short tons; except CO_2 [million short tons])

Greece	**CH_4**	**CO_2**	**N_2O**
Energy	0	50	3
Industry	3	21	3
Transport	7	19	1
Agriculture	309	0	22
Waste	125	0	0
Other	64	11	2
Total	505	101	33

Ireland	**CH_4**	**CO_2**	**N_2O**
Energy	0	15	2
Industry	0	6	3
Transport	2	7	1
Agriculture	722	0	21
Waste	112	0	0
Other	45	3	2
Total	881	31	29

Luxembourg	**CH_4**	**CO_2**	**N_2O**
Energy	0	1	0
Industry	0	4	0
Transport	0	1	0
Agriculture	19	0	1
Waste	4	0	0
Other	3	1	0
Total	26	7	1

Netherlands	**CH_4**	**CO_2**	**N_2O**
Energy	6	63	0
Industry	8	50	35
Transport	7	37	8
Agriculture	512	0	30
Waste	526	2	1
Other	242	51	5
Total	1302	204	79

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding. Negative emissions represent a sink for greenhouse gas.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-12. 1996 Emission Estimates for Norway, the Slovenia, Spain, and Sweden by EEA Source Category and Pollutant

(thousand short tons; except CO_2 [million short tons])

Norway	**CH_4**	**CO_2**	**N_2O**
Energy	3	11	0
Industry	1	13	6
Transport	3	16	1
Agriculture	119	0	10
Waste	214	0	0
Other	39	-14	0
Total	380	26	18

Slovenia	**CH_4**	**CO_2**	**N_2O**
Energy	NA	NA	NA
Industry	NA	NA	NA
Transport	NA	NA	NA
Agriculture	NA	NA	NA
Waste	NA	NA	NA
Other	NA	NA	NA
Total	NA	NA	NA

Spain	**CH_4**	**CO_2**	**N_2O**
Energy	13	78	11
Industry	7	70	15
Transport	12	72	4
Agriculture	1,128	0	66
Waste	903	0	0
Other	783	0	3
Total	2,846	220	99

Sweden	**CH_4**	**CO_2**	**N_2O**
Energy	2	16	2
Industry	6	20	7
Transport	21	22	2
Agriculture	180	0	18
Waste	67	0	0
Other	12	-22	1
Total	288	35	29

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding. Negative emissions represent a sink for greenhouse gas.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-13. 1996 Emission Estimates for the United Kingdom by EEA Source Category and Pollutant
(thousand short tons; except CO_2 [million short tons])

United Kingdom	CH_4	CO_2	N_2O
Energy	19	220	7
Industry	14	116	78
Transport	25	135	11
Agriculture	1,120	0	106
Waste	999	0	1
Other	924	170	2
Total	3,101	642	206

Note(s): NA = not available. Totals presented in this table may not equal the sum of the individual source categories due to rounding. Negative emissions represent a sink for greenhouse gas.

Source: ETC/Air Emissions (Database version 2.2, 10/25/99)[2]

Table 9-14. 1995 Emissions for Canada by Major Source Category
(thousand short tons)

Source Category	CO	NO_x	VOC	SO_2	TP	PM_{10}	$PM_{2.5}$
Industrial Sources	2,400	684	1,037	2,149	685	317	189
Nonindustrial Fuel Combustion	1,189	367	449	624	248	197	173
Transportation	7,394	1,422	810	150	108	105	92
Incineration	51	3	7	1	3	2	1
Miscellaneous	16	1	606	0	24	16	10
Open Sources	7,380	239	1,033	1	16,222	5,920	1,209
Total	**18,880**	**2,716**	**3,941**	**2,925**	**17,289**	**5,920**	**1,675**

Note(s): Totals presented in this table may not equal the sum of the individual source categories due to rounding.

Source: Environment Canada[3]

Table 9-15. 1995 Emissions for Canada by Province
(thousand short tons)

Source Category	CO	NO_x	VOC	SO2	TP	PM_{10}	$PM_{2.5}$
Alberta	2,206	720	841	670	5,573	1,742	296
British Columbia	1,904	291	290	194	713	334	193
Manitoba	1,718	120	262	403	1,085	449	147
New Brunswick	357	69	72	127	501	137	39
Newfoundland	262	47	58	72	368	113	34
Northwest Territories	2680	95	382	17	359	283	228
Nova Scotia	349	81	87	184	459	127	38
Ontario	4,186	613	906	697	3,867	1,151	287
Prince Edward Island	59	9	11	3	100	27	5
Quebec	2,728	422	537	412	2,375	713	195
Saskatchewan	2,173	236	459	145	1,812	209	190
Yukon	259	13	36	0	77	36	22
Total	**18,880**	**2,716**	**3,941**	**2,925**	**17,289**	**5,920**	**1,675**

Source: Environment Canada[3]

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